

1 1. (Thrice Amended) An integrated circuit device comprising:

2 a bond pad structure including:

3 a conductive pad;

4 a first doped region of a first conductivity type disposed in a semiconductor

5 substrate of a second conductivity type, wherein the first doped region is underlying and

6 surrounding the conductive pad;

7 a conductive region of the first conductivity type disposed in the first doped

8 region;

9 a first tap region spaced apart from and surrounding a substantial portion of the

10 first doped region, wherein the first tap region is electrically coupled to a first supply

11 voltage;

12 an output driver transistor having a drain region and a source region, wherein the drain

13 region is electrically coupled to the conductive pad; and

14 a second tap region surrounding the output driver transistor, wherein the second tap

15 region is electrically and physically coupled to a second supply voltage and the source region.

1 2. The integrated circuit device of claim 1 wherein the first and second supply

2 voltages are ground.

1 3. The integrated circuit device of claim 2 wherein the first tap region completely

2 surrounds the first doped region.

1 4. The integrated circuit device of claim 1 wherein the first tap region is a

2 discontinuous region.

1 5. The integrated circuit device of claim 1 wherein a doping concentration of the
2 first doped region is less than a doping concentration of the conductive region.

1 6. The integrated circuit device of claim 1 wherein the first tap region is a second
2 doped region and the second tap region is a third doped region.

1 7. The integrated circuit device of claim 6 wherein the second doped region is of an
2 opposite conductivity type than the first doped region.

1 8. The integrated circuit device of claim 6 wherein the third doped region is a P type
2 doped region and the output driver transistor is an NMOS type transistor.

1 9. The integrated circuit device of claim 1 further including a tap region portion that
2 is spaced apart from and surrounding the first doped region, wherein the tap region portion is
3 decoupled from the first supply voltage to provide a predetermined resistance between the first
4 doped region and the first supply voltage.

1 10. The integrated circuit device of claim 1 wherein a portion of the second tap region
2 is integrated into the source region.

1 11. The integrated circuit device of claim 10 wherein the first tap region is a
2 discontinuous region.

1 12. A bond pad for an integrated circuit device, the bond pad comprising:
2 a conductive bonding layer;
3 a doped region of a first conductivity type formed in a semiconductor substrate of a
4 second conductivity type, wherein the doped region is underlying and surrounding the
5 conductive bonding layer;
6 a conductive region of the first conductivity type disposed in the doped region, wherein
7 the conductive region is underlying the conductive bonding layer and wherein the conductive
8 region includes a surface area at least substantially equal to a surface area of the conductive
9 bonding layer; and
10 a conductive tap region spaced apart from and surrounding at least a portion of the doped
11 region, wherein a portion of the conductive tap region is electrically coupled to a supply voltage.

1 13. The bond pad of claim 12 wherein the supply voltage is a ground voltage and the
2 conductive bonding layer includes a metal.

1 14. The bond pad of claim 12 wherein the doping concentration of the doped region is
2 less than the doping concentration of the conductive region.

1 15. The bond pad of claim 12 wherein the conductive tap region is doped to be of an
2 opposite conductivity type than the first doped region.

1 16. The bond pad of claim 12 further including a conductive tap region portion that is
2 spaced apart from and surrounding the doped region, wherein the conductive tap region portion
3 is decoupled from the supply voltage to provide a predetermined resistance between the doped
4 region and the supply voltage.

1 17. The bond pad of claim 12 wherein the conductive tap region is a continuous
2 region.

1 18. The bond pad of claim 17 wherein the conductive tap region completely
2 surrounds the doped region.

1 19. The bond pad of claim 12 wherein the conductive tap region is a discontinuous
2 region.

1 20. The bond pad of claim 19 wherein the conductive tap region substantially
2 surrounds the doped region in a concentric-like manner.

1 21. The bond pad of claim 12 wherein the conductive region is polysilicon.

1 22. The bond pad of claim 21 wherein the conductive tap region is a doped layer
2 positioned beneath the conductive region.

1 23. (Thrice Amended) A transistor layout for an integrated circuit device having a bond
2 pad, the transistor layout comprising:
3 a drain region having a first conductivity type doping, wherein the drain region is formed
4 in a semiconductor substrate region having a second conductivity type doping, the drain region
5 being electrically coupled to the bond pad;
6 a source region including a second conductivity type doping; and
7 a conductive tap region spaced proximal to and surrounding the drain region, wherein the
8 conductive tap region is electrically coupled to a supply voltage and electrically and physically
9 coupled to the source region, wherein a section of the conductive tap region is structurally
10 integrated with the source region.

1 24. The transistor layout of claim 23 wherein the supply voltage is a ground voltage.

1 26. The transistor layout of claim 23 wherein the conductive tap region is spaced
2 proximal to and completely surrounds the drain region.

1 27. The transistor layout of claim 23 wherein the conductive tap region is a
2 discontinuous region.

1 28. The transistor layout of claim 23 further including:
2 a plurality of source regions, each source region of the plurality of source regions being
3 electrically and physically coupled to the conductive tap region;
4 a plurality of drain regions, each drain region of the plurality of drain regions being
5 electrically coupled to the bond pad; and
6 wherein the conductive tap region is spaced proximal to and surrounds at least one drain

7 region of the plurality of drain regions.

1 29. The transistor layout of claim 23 wherein the source region includes the first
2 conductivity type doping.

1 30. The transistor layout of claim 23 wherein the conductive tap region is contiguous
2 through a length of the source region.

1 31. The transistor layout of claim 23 further including a conductive tap region portion
2 spaced proximal to the drain region, wherein the conductive tap region portion is electrically
3 decoupled from the supply voltage and physically decoupled from the conductive tap region.

1 32. The transistor layout of claim 31 wherein the conductive tap region portion is
2 electrically decoupled from the supply voltage and physically decoupled from the conductive tap
3 region using a metal mask option.

1 33. The transistor layout of claim 23 wherein the first conductivity type doping is N
2 type doping and the second conductivity type doping is P type doping.

1 34. The integrated circuit device of claim 9 wherein the tap region portion is
2 physically separate from the first tap region.

1 35. The integrated circuit device of claim 16 wherein the conductive tap region
2 portion is decoupled from the first supply voltage using a metal mask option.

1 36. The bond pad of claim 16 wherein the conductive tap region portion is physically
2 separate from the conductive tap region.

1 37. The bond pad of claim 16 wherein the conductive tap region portion is decoupled
2 from the supply voltage using a metal mask option.